

UNCLASSIFIED

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE February 2000		
BUDGET ACTIVITY 6 - Management and Support				PE NUMBER AND TITLE 0605605A DOD High Energy Laser Systems Test Facility (HELSTF)				PROJECT DE97	
COST <i>(In Thousands)</i>	FY1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
DE97 DoD High Energy Laser Systems Test Facility (HELSTF)	23131	30803	14521	14306	14218	17037	17506	Continuing	Continuing

A. Mission Description and Budget Item Justification: The HELSTF provides a broad based high energy laser (HEL) RDTE capability located at White Sands Missile Range, NM in support of Tri-Service HEL research and development and damage, vulnerability, and lethality laser testing. The HELSTF's laser development support capabilities include a certified laser test range, a fully integrated laser support facility, an extensive array of fully instrumented test sites, the Sea Lite Beam Director (SLBD), the Mid-Infrared Advanced Chemical Laser (MIRACL), the Laser Device Demonstration (LDD), and the Low Power Chemical Laser (LPCL). By the end of FY00 the HELSTF will also provide a Solid State Laser (SSL) testbed, a lethality/propagation baseline, and a modeling and simulation baseline. This multiple use facility supports testing of laser effects for targets ranging from scaled laboratory up through full scale flying target.

FY 1999 Accomplishments:

- 14287 Performed operation and maintenance and base operations support functions in support of the Army, Department of Defense and other agencies conducting high energy laser systems concept development studies and test and evaluation on candidate high energy laser weapons systems (Tactical High Energy Laser, BMDO and other agencies Missile tracking [e.g. THAAD, PAC3]).
- 8559 Manufactured and integrated modules 2 and 3 of the 3 module SSL device including edge cladding, Amplified Spontaneous Emission control and wavefront distortion measurement/control. This device will be representative in demonstrating the relatively compact, lightweight, high power solid state laser technology. Tested and assessed Hybrid Electric High Mobility Multi-purpose Wheeled Vehicle (HE-HMMWV) power system in support of SSL applications.
- 285 Year 2000 Compliance.

Total 23131

Project DE97
Page 1 of 2 Pages
Exhibit R-2 (PE 0605605A)

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<p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 13679 Perform operation and maintenance and base operations support functions in support of the Army, Department of Defense and other agencies conducting high energy laser systems concept development studies and test and evaluation on candidate high energy laser weapons systems (Tactical High Energy Laser, Air Force Airborne and Space-Based Laser, other laser programs, tracking, and live-fire test programs). • 9633 Standup the DE Center of Excellence; to include, the development of a SSL pulse shaper, a comprehensive lethality/propagation baseline, a SSL testbed at HELSTF, a modeling and simulation baseline, HELSTF transformation plan, and the initiation of a detailed analysis of the Chemical Oxygen Iodine Laser (COIL) Electro-Chemical technology. • 6682 Testing of 3 module SSL completed with full characterization. Integration of laser diodes on single subscale disk to form diode pumped disk testbed.. • 809 Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR) Program. <p>Total 30803</p> <p>FY 2001 Planned Program:</p> <ul style="list-style-type: none"> • 14521 Perform operation and maintenance and base operations support functions in support of the Army, Department of Defense and other agencies conducting high energy laser systems concept development studies and test and evaluation on candidate high energy laser weapons systems (Tactical High Energy Laser, Air Force Airborne and Space-Based Laser, other laser programs, tracking, and live-fire test programs). <p>Total 14521</p>																																														
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